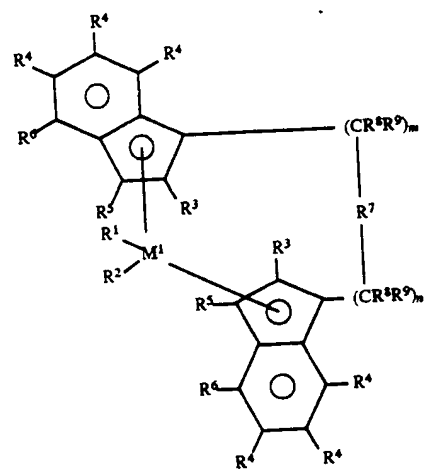
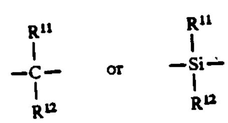
ABSTRACT

A process for the preparation of an olefin polymer by polymerization or copolymerization of an olefin of the formula R^a—CH═CH—R^b, in which R^a and R^b are identical or different and are a hydrogen atom or a hydrocarbon radical having 1 to 14 carbon atoms, or R^a and R^b, together with the atoms connecting them, can form a ring, at a temperature of from −60° to 200° C., at a pressure of from 0.5 to 100 bar, in solution, in suspension or in the gas phase, in the presence of a catalyst formed from a metallocene in the meso-form or a meso:rac mixture, with meso:rac>1:99, as transition-metal compound and a cocatalyst, wherein the metallocene is a compound of the formula I.

(I)



in which M^1 is Zr or Hf, R^1 and R^2 are identical or different and are methyl or chlorine, R^3 and R^6 are identical or different and are methyl, isopropyl, phenyl, ethyl or trifluoromethyl, R^4 and R^5 are hydrogen or as defined for R^3 and R^6, or R^4 forms an aliphatic or aromatic ring with R^6, or adjacent radicals R^4 form a ring of this type, and R^7 is a



radical, and m plus n is zero or 1.